

# The Art of Shipping Live Fish

The art of shipping live fish has been mastered by the tropical fish industry who ship millions of dollars worth of live fish around the world.

Before fish are packed, many factors must be considered. Are warm water fish being shipped to a cold climate or visa versa? What is the duration of the shipment before the box is unpacked? Is the species aggressive, needing isolation? Do they have sharp spines, which require double bagging?

Techniques for shipping live fish:

1. Only ship healthy fish that have not been fed for 2-4 days.
2. If the fish are cold tolerant, such as trout, bluegill, striped bass, etc. temperatures should be lowered gradually to 60° F/15.5° C (the metabolic rate of the fish will be reduced).
3. Know the quality of the water the fish will be released into at destination. Adjust the water quality slowly to the same pH, alkalinity and salinity, etc.
4. The clean water for shipping should be held separately from the fish before packing. Salt is typically added to the water at a rate of 1-5 parts per thousand. That is 0.8 to 4 pounds of salt per 100 gallons or 3.8-19 grams per gallon. This reduces osmotic stress on freshwater fish.
5. Various conditioners such as zeolite, activated carbon, pH lock and ammonia locking solutions may be used.
6. Fill shipping bags 1/3 full with pre-treated aerated water and gently place fish in the bags.
7. Compress the bag to remove all air and refill with pure oxygen. The typical ratio is 1/3 water 2/3 oxygen.
8. Double bag and seal with rubber bands, heat seal or other.
9. Place bags in insulated cartons and add heat or cold packs to maintain temperature.